

S/N 09/800,012

Response to Office Action Dated 10/29/2003

**REMARKS**

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This Response is  
5 believed to be fully responsive to all issues raised in the October 29, 2003 Office Action.

**§103 Rejections**

Claims 1 - 35 are rejected under 35 U.S.C. §103(a) as allegedly being  
10 unpatentable over Lin, US patent number 5,717,957 (Lin, hereinafter) in view of Rathonyi et al. patent number 6,359,877 (Rathonyi, hereinafter). Applicant respectfully traverses the rejection.

Lin teaches a switch for computer peripheral devices that is connected between the printer port of a personal computer and a printer or scanner. The  
15 switch has at least 3 standard BD-25 connectors. It is well-known that BD-25 connectors are standard bi-directional printer cables used to attach a PC with an external peripheral device. The first connector is connected to the printer port of a personal computer. The second connector is coupled to a printer. The third connector is coupled to a scanner. A control circuit is coupled to each of  
20 the 3 connectors to multiplex signals between the connectors. (Abstract; col. 2, lines 5 - 10, lines 50 - 65; col. 6, lines 48 - 58).

Applicant's claim 1 recites in part:

A multifunction peripheral device comprising:  
a printer system;  
a scanner system;  
an input/output (IO) system;  
a processor system; and,  
a switch fabric for routing packet-based data between the printer system, the scanner system, the IO system, and the processor system through switch IO buses, the switch IO buses providing a point-

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to-point dedicated interconnection between the switch fabric and each of the printer system, the scanner system, the IO system, and the processor system.

The Office asserts that Lin teaches a multifunctional device comprising a printer system and a scanner system, among other things. The Office points to Lin at Fig. 1, P1-P2 ports and column 2, lines 49-65, apparently to support  
5 the assertion that Lin teaches a multifunctional device comprising a printer system. The Office states that "printers [are] connecting to the P1 and P2 ports". The Office next points to Lin at Fig. 1, P3 port and column 2, lines 49-65, apparently to support the assertion that Lin teaches a multifunctional device comprising a scanner system. The Office states that a "scanner [is] connecting  
10 to the P3 port".

However, nowhere does Lin mention a multifunctional device of any kind. Lin teaches a switch which is capable of connecting a personal computer to singular peripheral devices such as printers and scanners. For example, at col. 1, lines 62-65, Lin discusses two distinct computer peripheral devices used  
15 alternatively, where a printer prints graphs scanned by a scanner. This is not a multifunctional device comprising a printer system and a scanner system. At col. 2, lines 25-33, Lin discusses using a plurality of computer peripheral devices simultaneously connected with the switch. This is also clearly not a multifunctional device comprising a printer system and a scanner system as  
20 generally recited in Applicant's claim 1.

Furthermore, Lin does not teach "a printer system" or a "scanner system" of any sort. Lin teaches a "switch" capable of connecting a personal computer to distinct, single function, peripheral devices, such as printers and scanners. In Fig. 1, Lin illustrates switch 100. The switch 100 includes a  
25 printer port connector P1, a printer connector P2, and a scanner connector P3.

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Lin's switch does not include "a printer system" or "a scanner system". It includes "connectors". Again, Applicant's claim 1 recites a "multifunctional peripheral device" comprising "a printer system", "a scanner system", etc.

At column 2, lines 49-65, Lin describes the switch 100 as including a  
5 "connector of the printer port P1", a "connector of the printer P2", and a  
"connector of the scanner P3". Although Lin's use of the English language is  
unorthodox to say the least, it is nevertheless very clear that Lin teaches a  
switch having 3 connectors. Lin's "connector of the printer port P1" is a  
printer port connector, P1, which is one of the 3 connectors of Lin's switch  
10 100. Connector P1 is not "a printer system" as the Office asserts. Lin's  
"connector of the printer P2" is a printer connector, P2, which is another one of  
the 3 connectors of Lin's switch 100. Connector P2 is also not "a printer  
system" as the Office asserts. Lin's "connector of the scanner P3" is a scanner  
connector, P3, which is another one of the 3 connectors of Lin's switch 100.  
15 Connector P3 is not "a scanner system" as the Office asserts.

Applicant's claim 1 recites a "multifunctional peripheral device"  
comprising "a printer system", "a scanner system", etc. Lin teaches a "switch"  
comprising 3 connectors. It is clear that Lin does not teach these elements of  
Applicant's claim 1.

20 In addition, Lin does not teach other elements of Applicant's claim 1,  
including:

a switch fabric for routing packet-based data between the printer  
system, the scanner system, the IO system, and the processor system  
through switch IO buses, the switch IO buses providing a point-to-point  
dedicated interconnection between the switch fabric and each of the  
printer system, the scanner system, the IO system, and the processor  
system.

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The Office points to Lin at Fig. 1 and col. 2, line 65 to col. 4, line 33, and asserts, among other things, that the I/O card connects to the port1 or LPT1-2 in order to transfer control instruction signals to the decoder 10 for processing.

5           However, it is notable that Lin does not teach or suggest a switch fabric for routing packet-based data between various systems through switch IO buses within a multifunctional device. As noted above, Lin teaches a switch that includes 3 BD-25 standard bi-directional printer cables used to attach a PC with an external peripheral device. Additionally notable, is that Lin does not teach  
10       switch IO buses that provide a "point-to-point" dedicated interconnection between a switch fabric and various systems within a multifunctional device. Lin's I/O card connection to port1 or LPT1-2 to transfer control instruction signals to decoder 10 for processing, contradicts the notion of a "point-to-point" dedicated interconnection as claimed in Applicant's claim 1.

15           It is well established that a prima facie case of obviousness requires, among other things, that the prior art reference (or references when combined) must teach or suggest all the claim limitations. Since Lin alone is relied upon as showing the elements discussed above of claim 1, and since Lin does not describe or suggest these elements, the rejection of claim 1 is not valid.  
20       Applicant therefore respectfully requests that the 35 U.S.C. §103(a) rejection to claim 1 be removed.

          The Office cites Rathonyi only for its purported discussion of packet-based data transmission as claimed in Applicant's claim 1, and not for any suggestion of a "multifunctional peripheral device" comprising "a printer  
25       system", "a scanner system", etc. Accordingly, Rathonyi does not remedy the deficiencies of Lin noted above, and claim 1 is allowable over the combination of these two references.

Furthermore, there is no suggestion or motivation in the cited references to combine or modify their teachings as suggested by the Office. Lin teaches a switch for a personal computer to connect between the printer port of the personal computer and a printer or scanner. Rathonyi teaches a system for minimizing overhead in packet re-transmission in a communication system such as a cellular telephone. One skilled in the art would not be motivated by either reference toward the other. The only reasonable explanation for arriving at a combination of Rathonyi and Lin to reject Applicant's claims is the use of impermissible hindsight vision afforded by Applicant's claims. The use of hindsight vision to derive the motivation necessary for combining the teachings of Lin and Rathonyi is impermissible and violates a basic tenet which applies to obviousness rejections (MPEP 2141).

Moreover, the combination of the teachings of Rathonyi with Lin clearly changes the principle of operation of Lin, and the references are therefore not properly combinable. As shown in Fig. 1 and discussed at col. 2, lines 49-65, Lin teaches a switch 100 comprising components which are specifically called out and which are the core of Lin's teaching. Lin's switch includes a decoder circuit, a function selection circuit, a control circuit for multiplex switching, a display device, and at least 3 standard BD-25 connectors. Rathonyi teaches a system for minimizing overhead in packet re-transmission in a communication system such as a cellular telephone. Rathonyi's system involves packet sequence numbering, packet transmission rates, packet sizes for adaptation into transmission blocks, etc. The use of Rathonyi's teachings to achieve or improve the purpose of Lin's teachings is to utterly gut, or render useless, the entirety of Lin's teachings. Although the Applicant is aware that combining the teachings of references does not involve an ability to combine their specific structures, such combinations cannot change the principle of operation of the

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primary reference. Combining Rathonyi's teachings with Lin's, changes the entire principle of operation of Lin.

For the additional reasons that the cited references are not properly combinable, as discussed above, the obviousness rejection of claim 1 is not supported. Applicant therefore respectfully requests that the 35 U.S.C. §103(a) rejection to claim 1 be removed.

Claims 2 - 10 depend from claim 1, and therefore contain all the elements of claim 1. Because the cited references fail to teach or suggest all the elements of claim 1, they likewise fail to teach or suggest all the elements of dependent claims 2 - 10. Therefore, claims 2 - 10 are allowable at least on the basis of their dependency from claim 1, in addition to the further elements recited therein which are neither shown nor suggested by the cited references. Accordingly, Applicant respectfully requests that the 35 U.S.C. §103(a) rejection to claims 2 - 10 be removed.

Applicant's claim 11 recites in part:

A printer comprising:  
a printer system;  
an IO system;  
a processor system; and,  
a switch fabric for routing packet-based data between the printer system, the scanner system, the IO system, and the processor system through switch IO buses, the switch IO buses providing a point-to-point dedicated interconnection between the switch fabric and each of the printer system, the scanner system, the IO system, and the processor system.

Claim 11 includes elements that parallel elements in claim 1. Furthermore, the Office asserts the same arguments against claim 11 as it does for claim 1. Thus, relevant arguments already made above to refute the Office assertions regarding claim 1 apply equally to claim 11. Therefore, the obviousness rejection of claim 11 is not supported by the cited references, and

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Applicant respectfully requests that the 35 U.S.C. §103(a) rejection to claim 11 be removed.

Claims 12 - 17 depend from claim 11, and therefore contain all the elements of claim 11. Because the cited references fail to teach or suggest all the elements of claim 11, they likewise fail to teach or suggest all the elements of dependent claims 12 - 17. Therefore, claims 12 - 17 are allowable at least on the basis of their dependency from claim 11, in addition to the further elements recited therein which are neither shown nor suggested by the cited references. Accordingly, Applicant respectfully requests that the 35 U.S.C. §103(a) rejection to claims 12 - 17 be removed.

Each of the remaining independent claims 18, 25, 30, 31 and 32, include elements which parallel elements already discussed above with respect to claims 1 and 11. Such elements, along with further elements recited in independent claims 18, 25, 30, 31 and 32, are neither shown nor suggested by the cited references. Therefore, the obviousness rejection of independent claims 18, 25, 30, 31 and 32, is not supported by the cited references, and Applicant respectfully requests that the 35 U.S.C. §103(a) rejection to claims 18, 25, 30, 31 and 32 be removed.

Furthermore, claims depending from independent claims 18, 25, 30, 31 and 32, are allowable at least on the basis of their dependency from their respective independent base claims, in addition to the further elements recited within such dependent claims which are neither shown nor suggested by the cited references. Such dependent claims include claims 19 - 24, 26 - 29, and 33 - 35. Accordingly, Applicant respectfully requests that the 35 U.S.C. §103(a) rejection to claims 19 - 24, 26 - 29, and 33 - 35 be removed.

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**Conclusion**

Claims 1 - 35 are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

Respectfully Submitted,

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